

Math 103X.02 Homework 3—due September 29

Instructor: Lenny Ng

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Please remember to show all work (even for odd numbered problems!), acknowledge any collaboration, and write up your own solutions.

§2.1: 13, 14, 19, 34, 45, 47

§2.2: 7, 11, 12, 13, 23, 28, 37, 39

§2.3: 1, 7, 9, 18, 19, 24, 29, 32

§2.4: 5, 9, 12

Notes:

- The answer in the back of the book for §2.2 # 13 is wrong!
- In §2.3 # 24, $\cos \pi xy$ means $\cos(\pi xy)$.

Extra problems:

1. Using the ϵ - δ definition of limit, show that $f(x, y) = c$ is a continuous function at all points in \mathbb{R}^2 , where c is some constant scalar.
2. Using the ϵ - δ definition of limit, show that $f(x, y) = x$ is a continuous function at all points in \mathbb{R}^2 .